Appendix 5-A
Existing Structures

EXISTING STRUCTURES

Table 5A-1 lists each structure and construction dates. Reclamation is expected in 2012.

Table 5A-1 Existing Structures

Existing Structure	Construction Dates Starting	Completion	Photo #
Sales/Receiving/Scale Office/Caretaker Dwelling	6/84	10/87	1
Fuel Tanks	10/83	6/84	2
Truck Loading Facility	9/82	4/83	3
Oil Slack Loading Facility	4/83	7/83	3
Storage & Stacking Facility	6/80	4/84	3
Conveyor Structures	3/80	6/80	3
~~Added~~ Machine Shop	11/89	12/89	5
Shop	10/83	9/84	4
Coal Processing Facility	4/80	12/85	6
Lump Coal Facility	10/83	12/85	6
Non-Coal Storage Yard	3/80	9/84	7
~~Transformer Sub-Station~~	~~4/80~~	~~6/80~~	~~8~~
~~Cross Conveyor~~	~~7/89~~	~~9/89~~	~~9~~
WHR Tank Seam Fan	7/4/01~~proposed~~	12/31/05	10
~~Coal Storage Bin~~	~~4/87~~	~~10/87~~	~~11~~
Powder Magazine	9/82	containerized	
Water Tanks & System	8/82	11/82	13
~~Mine Fan~~	~~9/82~~	~~11/82~~	~~14~~
Lump Coal Storage Pad	8/92	10/92	15
Equipment Wash Pad	8/92	10/92	16
Shower House	5/93	7/94	17
Antifreeze Storage Tank	12/93	1/94	18
WHR Blind Canyon Seam Fan	7/4/01	12/31/05	19
Wild Horse Ridge Conveyor Belt	7/4/01	12/31/05	9
WHR Substation	7/4/01	12/31/05	12
~~WHR Retaining Wall~~	~~7/4/01~~	~~12/31/05~~	
WHR ~~Water &~~ Fuel Tanks	7/4/01	12/31/05	14
WHR Coal Storage Bin	7/4/01	12/31/05	
Power Lines	7/4/01	12/31/05	
Water Lines	7/4/01	12/31/05	
~~Portable Fan~~	~~7/4/01~~	~~12/31/05~~	~~21~~
Fuel Containment Enclosure	7/4/01	12/31/05	
~~Tank Seam Borehole Structure~~	~~7/4/01~~	~~12/31/05~~	~~20~~
Mine Portals	-	-	-

The location of each of the listed structures is shown on Plate 5-2, Surface Facilities. Co-Op has sought interim approval for each structure in the course of construction. Hydrologic safeguards have been implemented and are described in Chapter 7 and shown on Plates 7-1A through 7-1G. Topsoil has been removed and stored as shown in Chapter 8, and interim revegetation has been completed where the earthwork is at final grade. Health and safety standards are implemented as per MSHA standards.

The support facilities will be operated in accordance with the Bear Canyon Coal Mining and Reclamation Permit.

All of the structures are to be reclaimed during reclamation as described in Chapter 8. In order to consolidate all previous plan submittals, current photographs were taken 5/90 and are attached herein. A brief description of each facility follows under "Facility Description".

FACILITY DESCRIPTIONS

1. Sales/Receiving/Scales Office/Caretaker Dwelling. This structure contains the parts warehouse, parts receiving, scale office, mine offices, and the Caretaker Dwelling. See Photo #1.

2. Fuel Tanks. There are three 10,000 gal. fuel storage tanks installed at the downslope of the shop area. These tanks are contained within a natural berm of

the slope with the only access by way of the disturbed drainage ditch leading directly to the sediment pond. The pond is designed to contain any spillage which could foreseeably occur. The area will be posted " No Smoking " and fire extinguishers are in place. All MSHA safety standards will be adhered to. See Photo #2.

3. Truck Loading Facility. The truck loadout is a conveyor system designed to load tractor-trailer trucks from any of the storage pile areas. It is electrically manipulated so as to minimize spillage. The area is cleaned of spilled coal as needed. All runoff is routed to the Sediment Pond "A". See Photo #3.

4. Oil/Dry Slack Loading Facility. The slack loadout is designed to handle oiled and non-oiled stoker coal, primarily for non-commercial clients. It includes a 20,000 ton storage bin with an electrically operated auger to load small tonnages. The bin is fed by a hopper and conveyor, which is loaded with a front end loader. See photo #3.

5. Coal Storage Area and Stacking Facility. The coal storage yard is equipped with a system of conveyors wherein coal can be segregated according to size. This storage is of a short-term nature; the piles are constantly being consumed and replenished. The area also contains two 6,000 gal oil storage tanks, which are used to store oil for stoker coal. All run-off is controlled, and passes through the Sediment Pond "A". See Photo #3.

6. Conveyor Structures. These conveyors are the route by which the coal exits the mine to the storage piles and loadouts. See Photo #3.

7. Shop/Machine Shop. The shop building is for servicing of both underground and surface equipment. The building is heated with a coal furnace and is equipped with standard heavy equipment handling implements such as winches, welders, etc. See Photo #4. A new machine shop (30 ft by 40 ft) was added in 1989 to better facilitate mine related repairs. See Photo #5.

8. Coal Processing Facility. This facility is primarily a coal sizing site where the various sizes of coal can be made and then stacked in the designed locations. Runoff from this area is routed to the Sediment Pond "A". See Photo #6.

9. Lump Coal Facility. This structure consists of a storage bin and loading conveyor. See Photo #6.

10. Non-Coal Storage Yard. This area is utilized for all material which is in storage on the property with projected use and/or salvage value. Runoff from this area is routed to the Sediment Pond "A". See Photo #7.

11. Transformer Substation. ~~This facility supplies electrical power to both surface and underground facilities. A fence is maintained around the structure, and the area complies with MSHA health and safety standards~~. This structure has been reclaimed See Photo #8.

~~Cross Conveyor. This belt conveys the coal from the Blind Canyon Seam to the coal storage bin. See Photo #9.12.~~

12~~13~~. WHR Tank Seam Fan. The Wild Horse Ridge Tank Seam Fan (Shown in Photo #10) was the old Blind Canyon Fan and is MSHA approved. All safety guards are maintained and in place.

13~~14~~. Coal Storage Bin. ~~This structure consists of a 20 ft X 20 ft surge bin to receive coal from the underground conveyors prior to traveling to the crusher. The structure is completely enclosed in order to control coal fines.~~ This structure has been reclamed. See Photo #11.

14~~15~~. Powder/Cap Magazines. This structure consists of a fire proof storage housing. See Photo . These structures comply with all requirements for Type 2 magazines as described in Sec. 1102, United States Code, Chapter 40, Subpart K - Storage, Section 55.208.

15~~16~~. Water Tanks. These surge tanks are a part of the culinary water supply system. See Photo #13.

~~17. Mine Fan. The mine ventilation fans include the Bear Canyon Fan (shown in Photo #14). The fan is MSHA approved, and all safety guards are maintained in place.~~

16~~18~~. Lump Coal Storage Pad. This structure consists of a concrete pad and concrete retaining walls. See Photo #15.

17~~19~~. Equipment Wash Pad. This structure consists of a concrete pad with a grease and oil trap. The grease and oil trap will be cleaned quarterly to prevent material buil-up. Material will be disposed of in the Emery County approved landfill. See photo #16.

18~~20~~. Shower House. This structure consists of a two story masonry block building that houses employee showers, training classrooms and offices. See Photo #17. The waste disposal system is discussed in Appendix 5-N.

19~~21~~. Antifreeze Storage Tank. This consists of 2,000 gal storage tank. Antifreeze solution is used to spray truck hoppers during periods of cold weather to prevent coal from freezing in transit. The tank is enclosed by a metal structure to hold the entire tank capacity in the event of a spillage. See photo #18.

2022. WHR Blind Canyon Seam Fan. The WHR Blind Canyon Seam Ventilation Fan came from the old Tank Seam mine and is MSHA approved, and all safety guards are maintained in place. See photo #19.

2123. Wild Horse Ridge Conveyor Belt. This structure transports coal from the Bear Canyon No. 3 Mine to the tipple facilities.

2224. WHR Substation. This facility supplies electrical power to the surface and underground facilities operating in Wild Horse Ridge.

~~25. WHR Retaining Wall. The wall is 30 feet tall and 300 feet long and was installed to allow for the widening of the upper Tank Seam access road.~~

2326. WHR ~~Water and~~ Fuel Tanks. These tanks are used to store ~~water and~~ diesel fuel. ~~The water is used for mining operations in the Bear Canyon No. 3 Mine~~. The fuel tank is used to refuel diesel equipment used in the operation of the No. 3 Mine. ~~The water tank came from the old T.S. mine.~~

2427. WHR Coal Storage Bin. This structure is used for coal surge capacity from the Bear Canyon No. 3 and 4 Mines. It consists of a metal storage silo approximately 30' diameter.

25~~28~~. Power Lines. Power is supplied to the mine facilities through high voltage power lines. The line pole locations are shown on Plates 5-2A through 5-2G.

26~~29~~. Water Lines. Water is supplied to the mine facilities with the use of a piping network. Water lines are shown on Plates 7-1A through 7-1G.

~~30. Portable Fan. This fan was added to the Bear Canyon #1 Mine to act as an auxiliary fan to the Bear Canyon #1 Mine Fan.~~

27~~31~~. Fuel Containment Enclosure. This structure is designed to contain material from the storage tanks if they should rupture. There are three tanks located within the enclosure, two 11,500 gal tanks and one 17,500 gal. The enclosure will consist of the base and 5 walls each 2'6" high enclosing an area of 1,500 ft^2. The structure will hold over 22,000 gal. Calculations are shown below.

V_{req} = 17,500 gal. * 1.1 = 19,250 gal = 2,600 ft^3

Enclosed Area = 1624 ft^2.

11,500 gal. Tank area = p* (7 ft)^2 = 155 ft^2

Containment Area = 1624 – (2*155) = 1,314 ft^2.

Wall height = 2,600ft^3 1,314 ft^2 = 2 feet + 4 inches freeboard

Actual wall height = 2 feet 4 inches.

Spill material will be drained out the bottom through a pipe with a locking valve and transported and disposed of in accordance with all state and federal

regulations. The enclosure will be checked weekly and drained of standing water if needed. Details of the design, maintenance, and spill disposal can be found in the C.W. Mining SPCC plan.

~~32. Tank Seam Borehole Structure. This metal structure fully encloses the borehole and conveyor, which conveys coal from the Tank Seam Mine to the Blind Canyon Seam Mine. See photo #20.~~

28~~33~~. Portals. ~~Bear Canyon Mine Complex has seven existing portals, and one proposed Portal. The Blind Canyon Seam (Plate 3-4A) has two fans, one belt, and two intake portals. The first fan portal is in Bear Canyon near the upper storage pad and the second is in the Blind Canyon. The belt portal pad is shown on plate 3-6. One intake portal is located in the main portal area, and one in Blind Canyon (Appendix 3-I). Three accidental breakouts also exist in Blind Canyon, making a total of 5 openings in the Blind Canyon Seam on the Blind Canyon side. Four of these have been reclaimed in the manner described in (Appendix 3-I). The remaining two have been permanently sealed and will be backfilled during final reclamation. There are two portals in the Hiawatha Seam (Plate 3-4B): a belt and and intake portal. Permanent seals have been places over there portals backfilling will take place during final reclamation.~~

~~The bear canyon #2 mine, has three portals (Plate 3-4C), that have been reclaimed.~~

The Bear Canyon #3 and #4 Mines, in Wild Horse Ridge, will have a total of six portals (Plate 3-4A and 3-4C), all located in Bear Canyon.

A Summary of the Portals are as follows:

		Existing	~~Proposed~~
Blind Canyon Seam	~~- Bear Canyon~~	3~~4~~	
	~~- Blind Canyon~~		
~~Hiawatha Seam~~	~~-~~	~~2~~	
Tank Seam	-	3	
	Total	6~~9~~	

Photo #1 Sales Receiving - Scale Office

Photo #2 Fuel Tanks

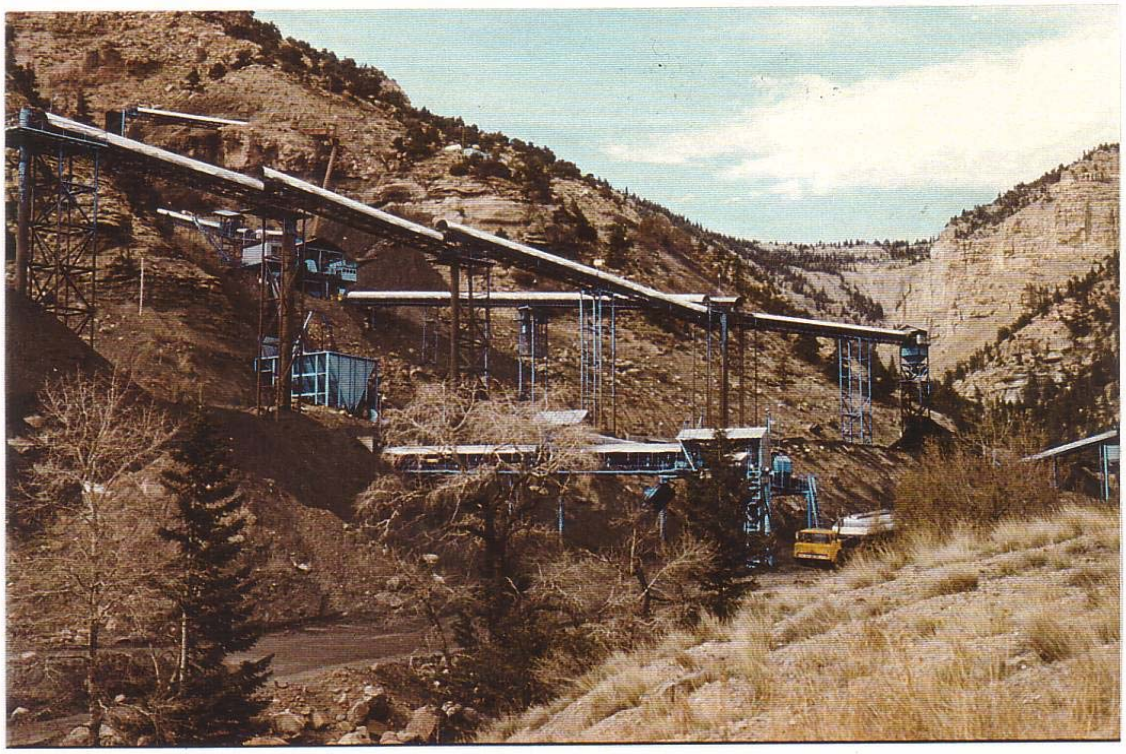

Photo #3 Truck Loading Facility, Oil Slack Loading Facility, Storage & Stacking Facility

Photo #4 Shop

Photo #5 Machine Shop

Photo #6 Coal Processing Facility, Lump Coal Facility

Photo #7 Non-Coal Storage Yard

This structure has been reclaimed
Photo #8 Transformer Sub-Station

Photo #9 ~~Cross~~ Wild Horse Ridge Conveyor Belt

Photo #10 WHR Tank Seam Fan

This structure has been reclaimed.
Photo #11 Coal Storage Bin

Photo #12 WHR Substation

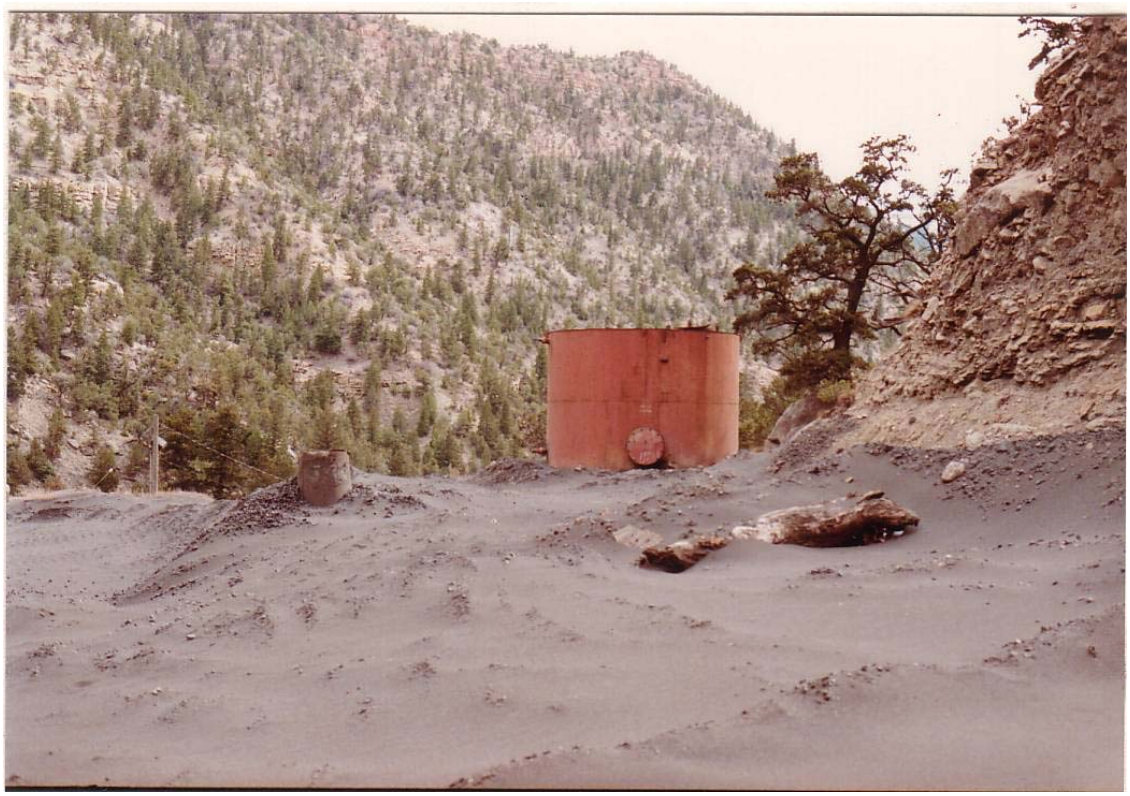

Photo #13 Water Tank

Photo #14 WHR Fuel Tank~~Mine Fan~~

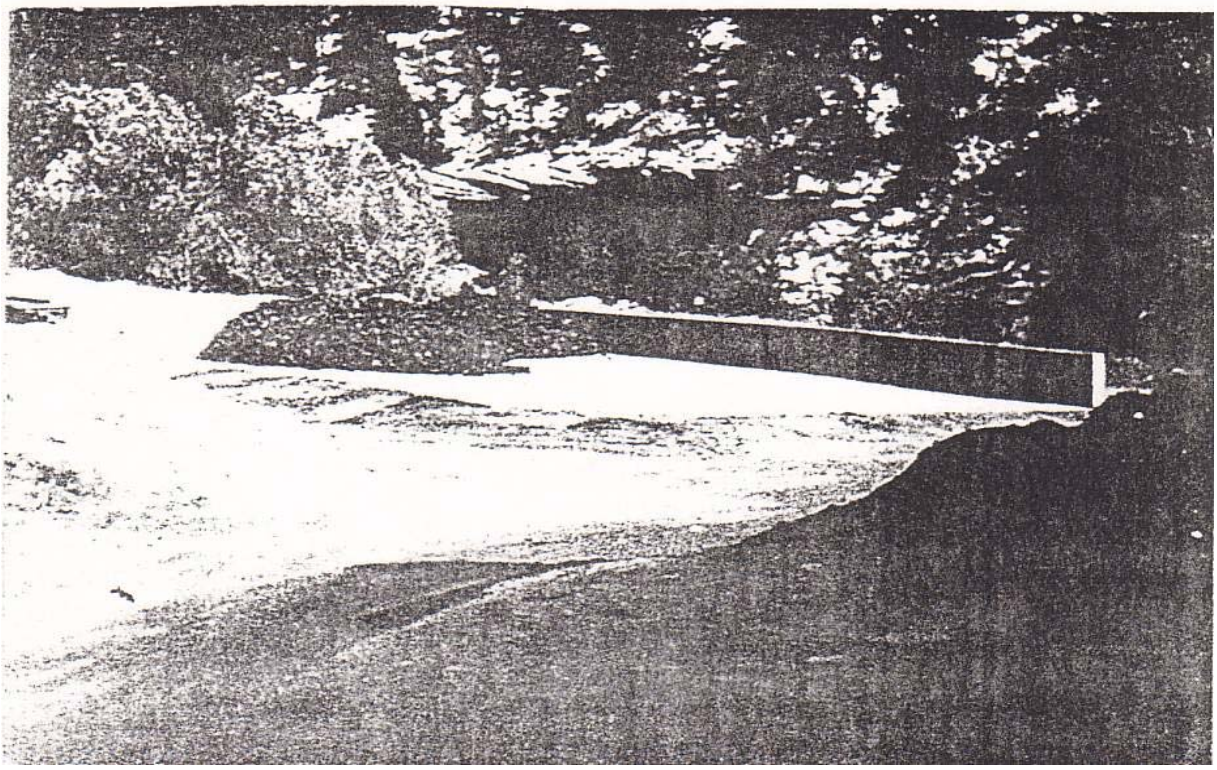

Photo #15 Lump Coal Storage Pad

Photo #16 Equipment Wash Pad

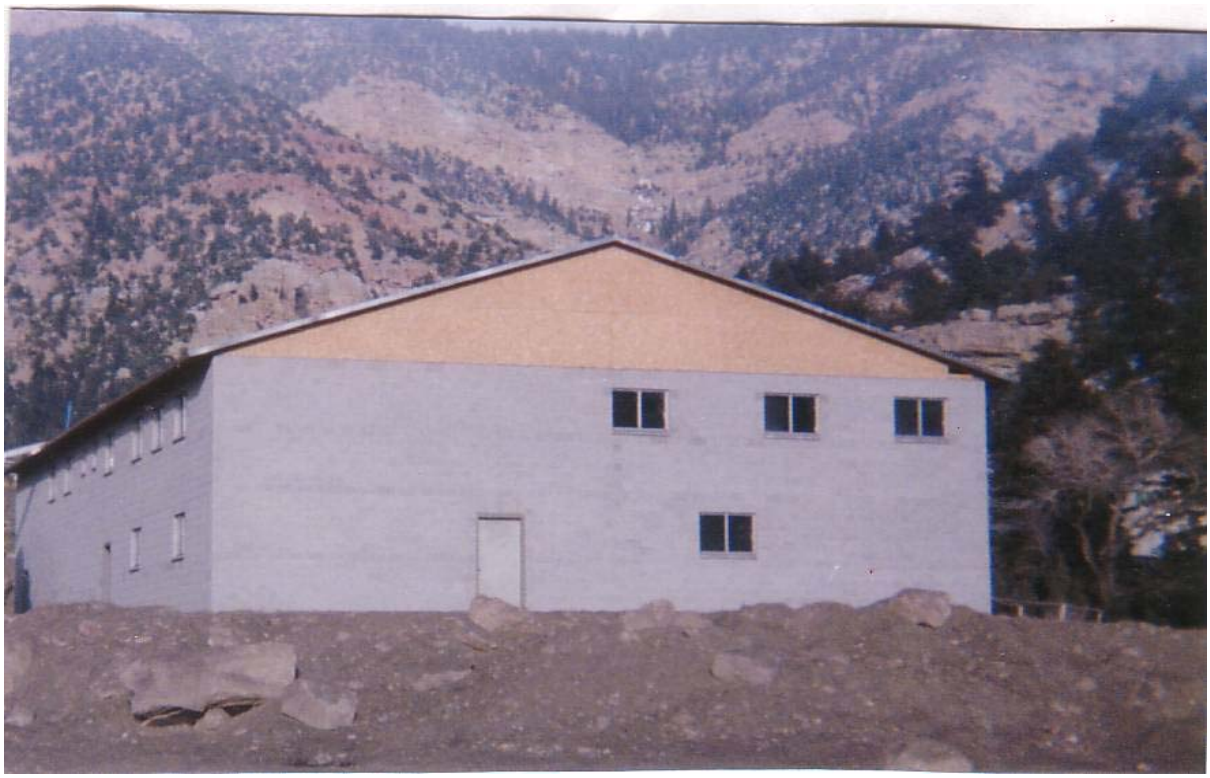

Photo #17 Shower House

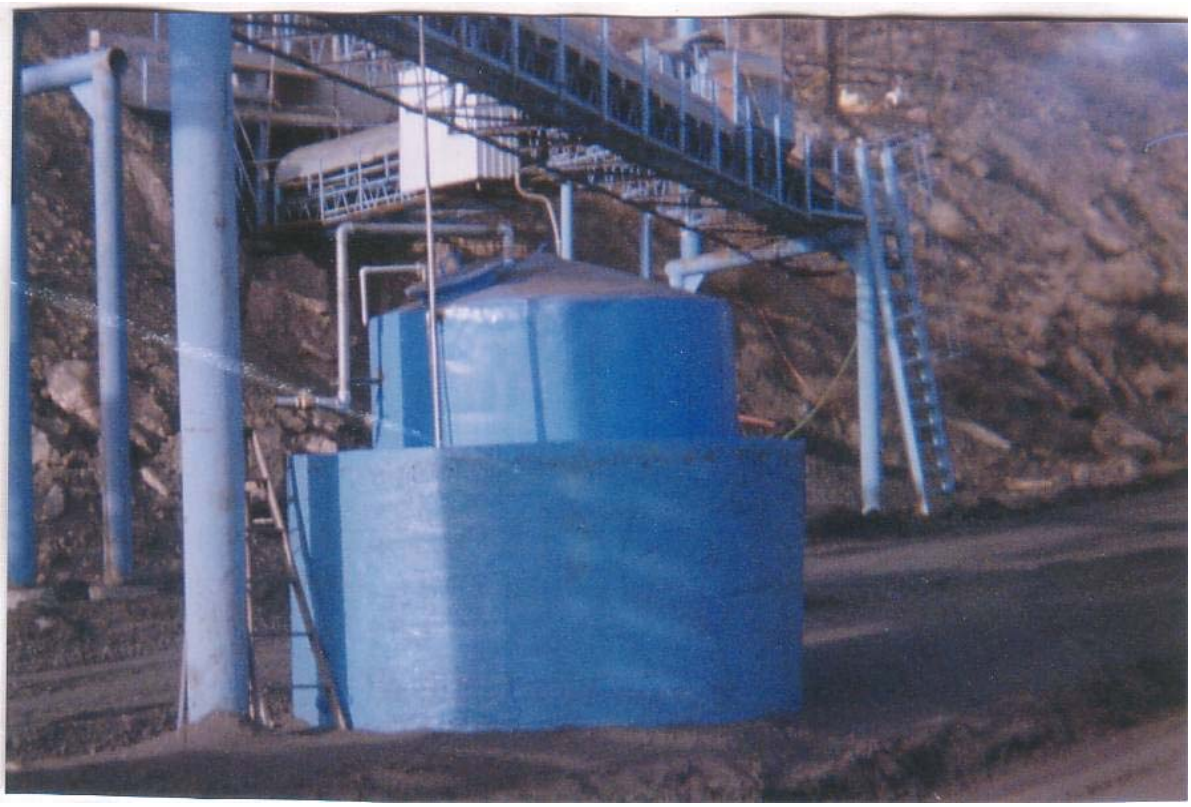

Photo #18 Antifreeze Storage Tank

Photo #19 WHR Blind Canyon Seam Fan

Photo #20 WHR Coal Storage Bin ~~Tank Seam Borehole Structure~~